

Memorandum For the Record

Subject: Visit to the USPHS at Lexington, Ky.

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1. The writer and Dr. Felikan visited Dr. Isbell at Lexington on the 2nd and 3rd of September to observe and discuss project (b)(3). A good deal of the single dose work has now been done and several interesting developments have occurred.

2. The experiment was started by establishing the subjects (5) in the test ward and allowing them to become used to the personnel, environment, etc. for a few weeks. The normal values for these subjects for a large battery of tests were then determined. The tests include physiological, neurological, psychological, and such things as clinical observation and EEG, etc. The subjects were then given daily doses of LSD and placebo and the testing continued. The doses given were of the order of 100 gamma. All of the usual symptoms were reported on the first dose; however, when that same dose was repeated on the next day, no symptoms developed. In the course of further testing it became more evident that a tolerance was rapidly developed by the subjects. At the present time the data indicate that after a dose of 100 gamma on a given day, at least 4 days have to elapse before he will again show symptoms of the drug. We observed one subject who was showing no symptoms on 135 gamma after having had 80 gamma the previous day and then we saw him the next day after he had been given 130 gamma. The only symptoms he was showing at this level were slight patellar hyperreflexia and very slight mydriasis. He indicated in all these trials that he felt no drug action while on the original 80 gamma dose he had reported intense reaction in all departments. It would seem at first glance that this property would impose a most serious limitation on the usefulness of this drug. 215

3. Dr. Wikler has gotten very interesting results from photic stimulation while running the EEGs on reacting subjects. His general conclusion is that LSD potentiates the visual illusions brought on by this type of stimulation. One subject had clonus and approached an epileptic seizure under this treatment. He saw himself become first larger and then progressively smaller until he had to conclude that he was observing himself in the embryonic state. At this point a man with a shotgun entered the picture in a threatening way and the patient was so close to convulsion that the experiment had to be terminated. The subject interpreted the episode as an attempt on his mother's part to abort while she was carrying him. He also felt that Dr. Wikler was shocking him with the electrodes and that he (Dr. Wikler) could read his subconscious mind. Another subject who got a strong reaction later indicated that his illusions also started with backward in time and centered around his repressed desire to kill a white man.

4. The supply situation with regard to LSD is critical. Dr. Isbell is in contact with Mr. Erickson at Sandoz and has been promised whatever material become/available but the outlook is not good. A supply of LAE has also been ordered and while there is very little in this country at the present time, the outlook for more is very good. Dr. Isbell plans to go to high doses of LSD to test reversal of the tolerance, so the experiment is using much more material than was originally indicated. Even if Sandoz can supply all of the LSD that has been ordered, it probably will not be possible to complete the present experiment as originally planned. The LAE was ordered as a first attempt to fill this gap.

5. To sum up the results so far, it has been found that tolerance develops on the first dose of LSD and four or five days are required to overcome it even with a 50% increase in dose. LSD plus photic stimulation carries the subject back in time and increases all subjective feelings, the main distortions observed in the subjects have been those involving the size and color of hands and feet, and LSD potentiates the effects of photic stimulation. In addition, no toxic manifestations as exhibited by liver, urine, or blood changes have been found. There is no gross change in the EEG. The subjects sleep all right the night following a dose, but sometimes complain of a hangover the next day. They don't eat so much under the influence as normally (500 cal vs usual 2500). Several physical changes during intoxication have been observed. The blood pressure is reliably elevated from around 115 to near 140 by about 100 gamma, and the pulse rate increases along with the respiratory rate. The pupils are uniformly dilated by about 3mm. Hyperreflexia seems always to occur.

6. In proceeding, Dr. Isbell will feel his way to higher doses in an attempt to break down the tolerance. He also plans to carry out the chronic testing more or less as originally planned, but it will no doubt go at much higher levels of drug. He will begin work with LAE when he has a supply and when the LSD experiment will allow it. A-50

7. Dr. Isbell has talked to Charley Winters of Merks about the new Nalline derivatives that were discussed at the last meeting. He found that all of the good materials had already been turned over to him. He felt that there would be little profit to us to try any more of these materials, since none of them show any real promise. Uniformly, they have such serious side and after effects that they are quite dangerous to use. He pointed out that [redacted], while testing one of the acetylmethadols in a patient, almost lost the man and had to make a wild telephone call to Lexington to find out what to do to bring the man out of it.

8. The writer makes humble apology for the interminable length of this report.